MOTION FILED
OCT 14 1994

No. 94-494

IN THE

Supreme Court of the United States

OCTOBER TERM, 1994

BRISTOL-MYERS SQUIBB COMPANY,

Petitioner,

v.

ZENITH LABORATORIES, INC.,

Respondent.

On Petition for Writ of Certiorari to the United States Court of Appeals for the Federal Circuit

MOTION FOR LEAVE TO FILE A BRIEF *AMICUS CURIAE* AND BRIEF *AMICUS CURIAE* OF HOFFMANN-LA ROCHE INC. AND AMERICAN HOME PRODUCTS CORP. IN SUPPORT OF PETITIONER

ALAN P. KASS
(Counsel of Record)

GEORGE M. GOULD
HOFFMANN-LA ROCHE INC.
340 Kingsland Street
Building 85—5th Floor
Nutley, New Jersey 07110
(201) 235-5000

LOUIS L. HOYNES, JR.
EGON E. BERG
AMERICAN HOME PRODUCTS CORP.
Five Giralda Farms
Madison, New Jersey 07940
(201) 660-5000

20pp

IN THE

Supreme Court of the United States

OCTOBER TERM, 1994

No. 94-494

BRISTOL-MYERS SQUIBB COMPANY,

Petitioner,

v.

ZENITH LABORATORIES, INC.,

Respondent.

On Petition for Writ of Certiorari to the United States Court of Appeals for the Federal Circuit

---

MOTION BY HOFFMANN-LA ROCHE INC. AND AMERICAN HOME PRODUCTS CORP. FOR LEAVE TO FILE A BRIEF *AMICUS CURIAE* IN SUPPORT OF PETITIONER

Hoffmann-La Roche Inc. ("Roche") and American Home Products Corp. ("AHP") hereby move for leave to file the attached brief *amicus curiae* in support of petitioner, Bristol-Myers Squibb Company ("Bristol-Myers"). Roche and AHP sought written consent to file this brief from both parties. Such consent was obtained from Bristol-Myers and placed on

file with the Clerk. Respondent, Zenith Laboratories, Inc. ("Zenith"), refused to provide such consent.

INTERESTS OF THE *AMICI CURIAE*

Roche is engaged in the research, development, and manufacture of products, mainly pharmaceuticals, grounded in the sciences of chemistry and biotechnology. Roche is one of the four main centers for research and development for its Swiss-based parent company, Roche Holding Ltd., which in 1992 alone spent over $1 billion on pharmaceutical research and development. The United States Patent and Trademark Office has issued to Roche over 1000 patents since 1976, at least eight of which (described in the attached *amicus* brief) contain one or more "fingerprint" claims of the type at issue in the case at bar. Many of Roche's patents are also for inventions that might be said, as the Federal Circuit said here of Bristol-Myers' patented invention, to perform functions that were known prior to the granting of such patents.

AHP also engages in the research, development and manufacture of pharmaceuticals, which comprised approximately 58% of its sales in 1993. Among AHP's subsidiaries and divisions are Wyeth-Ayerst Laboratories and Wyeth-Ayerst Research, which produce pharmaceutical, vaccine, and nutritional products, and Genetics Institute, Inc., which is developing "biopharmaceuticals," products based on biotechnology. In 1993, AHP spent over $650 million on research and development, and since 1976 AHP has been awarded over 1100 U.S. patents. Like Roche, AHP is concerned with the Federal Circuit's decision regarding fingerprint claims and the doctrine of equivalents for inventions that could be said to perform old functions.

Therefore, the Federal Circuit's decision in this case and the issues raised by petitioner involve aspects of patent law that are of immediate and significant concern to Roche and AHP.

ISSUES TO BE ADDRESSED IN THE BRIEF *AMICUS CURIAE*

As more fully detailed in the attached brief, the Federal Circuit's decision is contrary to the constitutional purpose underlying the nation's patent laws: to promote the progress of useful arts. To carry out that purpose, the patent laws seek to encourage inventors to disclose their discoveries in exchange for obtaining strong patent protection; otherwise, inventors are likely to maintain such discoveries as trade secrets, which do nothing to add to this country's body of scientific knowledge or enhance its competitive advantage.

The Federal Circuit's decision in this case weakens the scope of patent protection in two significant areas: (1) patents that contain fingerprint claims, which are used to protect compounds whose structures are difficult or impossible to ascertain or describe completely; and (2) application of the doctrine of equivalents to patents that perform functions that were known, even though such patents necessarily represent a technological advance over prior knowledge and often perform in an improved way. The Federal Circuit's weakening of these two important aspects of the patent laws has the effect of encouraging inventors to preserve their discoveries as trade secrets, rather than encouraging the disclosure of their inventions. Even more importantly, the decision of the Court of Appeals discourages inventors from engaging in research and development in the first instance.

Because Roche's and AHP's scientists are among the numerous inventors who are affected by the Federal Circuit's decision in the case at bar, Roche and AHP respectfully ask for leave to file the attached brief *amicus curiae* to address these important issues.

CONCLUSION

For the foregoing reasons, this motion for leave to file a brief *amicus curiae* should be granted.

Respectfully submitted,

ALAN P. KASS
(Counsel of Record)
GEORGE M. GOULD
HOFFMANN-LA ROCHE INC.
340 Kingsland Street
Building 85—5th Floor
Nutley, New Jersey 07110
(201) 235-5000

LOUIS L. HOYNES, JR.
EGON E. BERG
AMERICAN HOME
PRODUCTS CORP.
Five Giralda Farms
Madison, New Jersey 07940
(201) 660-5000

Dated: October 14, 1994

TABLE OF CONTENTS

PAGE

TABLE OF AUTHORITIES ii

REASONS FOR GRANTING THE PETITION 2

I. THE FEDERAL CIRCUIT'S DECISION WILL DISCOURAGE INVENTORS FROM SEEKING PATENT PROTECTION FOR INVENTIONS PROTECTIBLE BY FINGERPRINT CLAIMS . . 5

II. THE FEDERAL CIRCUIT'S DECISION WILL DISCOURAGE INVENTORS FROM SEEKING PATENT PROTECTION FOR INVENTIONS THAT ARGUABLY PERFORM KNOWN FUNCTIONS 13

CONCLUSION 17

TABLE OF AUTHORITIES

PAGE

Cases

Bonito Boats, Inc. v. Thunder Craft Boats, Inc.,
489 U.S. 141 (1989) 3

Continental Paper Bag Co v. Eastern Paper Bag Co.,
210 U.S. 405 (1908) 15

Eibel Process Co. v. Minnesota & Ontario Paper Co.,
261 U.S. 45 (1923) 15

Goldstein v. California, 412 U.S. 546 (1973) 4

Graham v. John Deere Co.,
383 U.S. 1 (1966) 2

Graver Tank & Mfg. Co. v. Linde Air Prods. Co.,
339 U.S. 605 (1950) 13, 16

Kearney & Trecker Corp. v. Giddings & Lewis, Inc.,
452 F.2d 579 (7th Cir. 1971), *cert. denied*,
405 U.S. 1066 (1972) 3, 5

Laitram Corp. v. Cambridge Wire Cloth Co.,
863 F.2d 855 (Fed. Cir. 1988), *cert. denied*,
490 U.S. 1068 (1989) 15

Mazer v. Stein, 347 U.S. 201 (1954) 4

PAGE

Panther Pumps & Equip. Co. v. Hydrocraft, Inc., 468 F.2d 225 (7th Cir. 1972), *cert. denied*, 411 U.S. 965 (1973) 3

United States v. Dubilier Condenser Corp., 289 U.S. 178 (1933) 3

Universal Oil Prods. Co. v. Globe Oil & Refining Co., 322 U.S. 471 (1944) 3

Zacchini v. Scripps-Howard Broadcasting Co., 433 U.S. 562 (1977) 4

Constitutional Provision

U.S. Const. art. I, § 8, cl. 8 2

Statutes

35 U.S.C. § 101 (1988) 15

35 U.S.C. § 102 (1988) 15

35 U.S.C. § 103 (1988) 15

35 U.S.C. § 112 (1988) 5

Rules

Fed. R. Civ. P. 52(a) 12

PAGE

Other Authorities

C. Harold Herr, *Preparing the Application (Claims)*, in *The Law of Chemical, Metallurgical and Pharmaceutical Patents* (Howard I. Forman ed., 1967) 6

Abraham Lincoln, *Second Lecture on Discoveries and Inventions*, in 3 *The Collected Works of Abraham Lincoln* (R.P. Basler ed., 1953) 4

Rochelle K. Seide, *Drafting Claims for Biotechnology Inventions*, in *Advanced Claim Drafting and Amendment Writing Workshop 1993* (PLI Pats., Copyrights, Trademarks, & Literary Prop. Course Handbook Series No. 378, 1993) 6

IN THE

Supreme Court of the United States

OCTOBER TERM, 1994

No. 94-494

BRISTOL-MYERS SQUIBB COMPANY,

Petitioner,

v.

ZENITH LABORATORIES, INC.,

Respondent.

On Petition for Writ of Certiorari to the United States Court of Appeals for the Federal Circuit

---

BRIEF *AMICUS CURIAE* OF HOFFMANN-LA ROCHE INC. AND AMERICAN HOME PRODUCTS CORP. IN SUPPORT OF PETITIONER

This brief *amicus curiae* is filed by Hoffmann-La Roche Inc. ("Roche") and American Home Products Corp. ("AHP") in support of petitioner, Bristol-Myers Squibb Company ("Bristol-Myers"), contingent upon the granting of the foregoing motion for leave to file such brief. The motion was necessitated by the failure of respondent, Zenith Laboratories,

Inc. ("Zenith"), to consent to the filing of this brief. The interests of the *amici curiae* are set forth in that motion.

REASONS FOR GRANTING THE PETITION

Congress was given the power to promulgate the patent laws of the United States in order to fulfill a particular constitutional purpose: "To promote the Progress of . . . useful Arts, by securing for limited Times to . . . Inventors the exclusive Right to their . . . Discoveries." U.S. Const. art. I, § 8, cl. 8; *see also Graham v. John Deere Co.*, 383 U.S. 1, 5 (1966) ("the federal patent power stems from a specific constitutional provision"). Toward that end, the federal government grants such exclusive right—to inventors who meet the statutory requirements for obtaining patents—in order to encourage inventors to disclose their discoveries, rather than maintaining them as trade secrets. As this Court has explained:

> The applicant whose invention satisfies the requirements of novelty, nonobviousness, and utility, and who is willing to reveal to the public the substance of his discovery and "the best mode . . . of carrying out his invention," 35 U.S.C. § 112, is granted "the right to exclude others from making, using, or selling the invention throughout the United States," for a period of 17 years. 35 U.S.C. § 154. The federal patent system thus embodies a carefully crafted bargain for encouraging the creation and disclosure of new, useful, and nonobvious advances in technology and design in return for the exclusive right to practice the invention for a period of years.

Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 U.S. 141, 150-51 (1989); *see also Universal Oil Prods. Co. v. Globe Oil & Refining Co.*, 322 U.S. 471, 484 (1944) ("As a reward for inventions and to encourage their disclosure, the United States offers a seventeen-year monopoly to an inventor who refrains from keeping his invention a trade secret."); *United States v. Dubilier Condenser Corp.*, 289 U.S. 178, 186 (1933) ("[The inventor] may keep his invention secret and reap its fruits indefinitely. In consideration of its disclosure and the consequent benefit to the community, the patent is granted."); *Kearney & Trecker Corp. v. Giddings & Lewis, Inc.*, 452 F.2d 579, 593 (7th Cir. 1971) ("The purpose of the patent grant is to reward, and thereby to encourage, invention by exchanging a limited exclusive right for disclosure of the inventor's novel concept."), *cert. denied*, 405 U.S. 1066 (1972).

As the Court of Appeals for the Seventh Circuit (per Judge Stevens) noted, this Court has "recognized that a patentee has a right to a full monopoly return on the invention which he has discovered and disclosed to the public. It is his right to that return which provides the incentive for invention and disclosure which the entire patent system is designed to encourage." *Panther Pumps & Equip. Co. v. Hydrocraft, Inc.*, 468 F.2d 225, 231-32 (7th Cir. 1972) (footnote omitted) (citing *Pope Mfg. Co. v. Gormully*, 144 U.S. 224, 234 (1892)), *cert. denied*, 411 U.S. 965 (1973).

Thus, without the full promised reward of strong protection under the patent laws, inventors would be inclined to refrain from disclosure and instead obtain protection by harboring their discoveries as trade secrets. Such actions tend to retard the progress of useful arts and withhold the accompanying benefits of scientific research from the commu-

nity. Hence, a weakening of the exclusive rights granted to inventors by the patent laws lessens the incentive to disclose those inventions and increases the incentive to preserve such inventions as trade secrets.

Most importantly, such weakening of the exclusive rights lessens the incentive to fund scientific research in the first instance, thereby undermining a system that has provided great benefit to the public. *See Mazer v. Stein*, 347 U.S. 201, 219 (1954) ("The economic philosophy behind the clause empowering Congress to grant patents and copyrights is the conviction that encouragement of individual effort by personal gain is the best way to advance public welfare through the talents of authors and inventors in 'Science and useful Arts.'"); *see also Zacchini v. Scripps-Howard Broadcasting Co.*, 433 U.S. 562, 576 (1977) ("protection [of the right of publicity] provides an economic incentive . . . to make the investment required to produce a performance . . . . This same consideration underlies the patent and copyright laws long enforced by this Court."); *Goldstein v. California*, 412 U.S. 546, 555 (1973) ("to encourage people to devote themselves to intellectual and artistic creation, Congress may guarantee to authors and inventors a reward in the form of control over the sale or commercial use of copies of their works").[1]

---

[1]As President Lincoln, himself a patentee (*see infra* note 5), explained: "[T]he inventor had no special advantage from his invention [under English law prior to 1624]. The patent system changed this . . . . [I]t added the fuel of interest to the fire of genius in discovery and production of new and useful things." Abraham Lincoln, *Second Lecture on Discoveries and Inventions*, in 3 *The Collected Works of Abraham Lincoln* 356, 363 (R.P. Basler ed., 1953).

The Federal Circuit's decision in this case weakens patent protection, thereby decreasing the incentive to disclose inventions, (a) by rendering uncertain the proof required to demonstrate infringement of fingerprint claims; and (b) by effectively eliminating the doctrine of equivalents for inventions that perform known functions. As such, the decision is contrary to the constitutional purpose underlying the patent laws. *Amici* therefore respectfully urge this Court to grant the petition.

I. THE FEDERAL CIRCUIT'S DECISION WILL DISCOURAGE INVENTORS FROM SEEKING PATENT PROTECTION FOR INVENTIONS PROTECTIBLE BY FINGERPRINT CLAIMS

As part of the *quid pro quo* for receiving exclusive rights in an invention for a limited time, an inventor must make a disclosure concluding with "one or more claims particularly pointing out and distinctly claiming" the invention. 35 U.S.C. § 112 (1988); *Kearney & Trecker*, 452 F.2d at 593. However, for certain inventions—particularly certain chemical and biotechnology-related inventions—meeting this requirement of the patent laws presents special problems: a scientist may discover a new product but be unable to ascertain or describe completely the structure of that product. To obviate such problems, patent law practice came to recognize and accept "fingerprint" claims: claims that particularly specify a composition by delineating certain identifying characteristics. As explained in one treatise:

> Even though a chemical structure of a novel composition does not yield to diligent attempts at analysis, an applicant [for a patent] can still claim such a composition in the absence of a structural formula provided he

> sets forth sufficient characterization by means of physical and chemical tests, such as, for example, melting temperature, optical rotation, properties of derivatives, absorption spectra, infrared spectra, nuclear magnetic resonance data and the like.

C. Harold Herr, *Preparing the Application (Claims)*, in *The Law of Chemical, Metallurgical and Pharmaceutical Patents* 351, 372 (Howard I. Forman ed., 1967); *see also* Rochelle K. Seide, *Drafting Claims for Biotechnology Inventions*, in *Advanced Claim Drafting and Amendment Writing Workshop 1993*, at 393, 451 n.148 (PLI Pats., Copyrights, Trademarks, & Literary Prop. Course Handbook Series No. 378, 1993) ("A fingerprint claim claims a product by its characteristics not by its structure, *e.g.*, claiming a DNA strand by electrophoresis gel runs or a chemical compound by mass-spectrometry and infra-red readings.").

A consideration of certain patents granted to Roche's scientists will illustrate the practical problems created by the Federal Circuit's decision, which problems the entire pharmaceutical and chemical industries now face. Roche has received at least eight U.S. patents since 1976 that include one or more fingerprint claims. Typical is U.S. Patent No. 4,579,855 (entitled "Mefloquin Hydrochloride"), which describes a specific form of a compound (modification E of pure mefloquin hydrochloride) used in the treatment of a

certain type of malaria.[2] The second claim of that patent is a fingerprint claim that uses x-ray diffraction data:

> We claim:
>
> . . . .
>
> 2. Essentially pure erythro-α-2-piperidyl-2,8-bis-(trifluoromethyl)-4-quinolinemethanol hydrochloride in the form of its modification E characterized by the IR spectrum, FIG. 5, and/or the X-ray diffraction pattern and/or the d-values, FIG. 6.

U.S. Patent No. 4,579,855, col. 6, ll. 9-17. Figure 6 of this patent depicts an x-ray diffraction diagram of mefloquin hydrochloride, modification E, and the following table:

---

[2]The other seven U.S. patents are No. 4,452,782 (entitled "Pentadecapeptide") (fingerprint data: infrared absorption); No. 4,304,861 ("Process of Producing Antibiotic SM-173B with *Streptomyces Chromofuscus*") (elemental analysis, ultraviolet absorption, and infrared absorption); No. 4,278,663 ("Antibiotic X-14868A, B, C and D") (infrared absorption); No. 4,273,765 ("Amino Sugar Derivatives Containing Trehalose") (ultraviolet absorption, infrared absorption, and proton nuclear magnetic resonance); No. 4,206,129 ("Antibiotic SM-173B") (elemental analysis, specific rotation, ultraviolet absorption, and infrared absorption); No. 4,152,424 ("Antibiotic 1745A/X and Methods for the Production Thereof") (infrared absorption and nuclear magnetic resonance); and No. Re. 28,700 ("Antibiotic X-5108 for Stimulating Growth") (elemental analysis, infrared absorption, and nuclear magnetic resonance). Only the last of these has expired; the others are all within the seventeen-year period of patent protection.

Measured d-values

Line No.	d (Å)	Line No.	d (Å)
1	18.99	15	3.81
2	13.28	16	3.74
3	9.93	17	3.70
4	9.50	18	3.60
5	9.35	19	3.57
6	6.84	20	3.37
7	6.70	21	3.34
8	5.98	22	3.18
9	5.05	23	3.05
10	4.94	24	2.93
11	4.41	25	2.86
12	4.21	26	1.91
13	3.95	27	1.90
14	3.84	28	1.78

U.S. Patent No. 4,579,855, Fig. 6. The foregoing fingerprint claim is quite similar to the fingerprint claim of the Bristol-Myers patent in suit, in which a particular product (Bouzard monohydrate) is similarly claimed by setting forth x-ray diffraction data. Pet. at 4-5. Hundreds of other examples of fingerprint claims could be proffered.[3]

---

[3]Petitioner cites a computer search disclosing roughly 400 unexpired patents with x-ray diffraction data. Pet. at 18 & n.15. A computer search conducted on Dialog by *amici* for U.S. patents containing fingerprint claims revealed the following examples: No. 4,880,612 (entitled "Hexaaminealuminum Iodide Monoammoniate and Process for Its Preparation") (assigned at issuance to: Hoechst Aktiengesellschaft) (fingerprint data: x-ray diffraction); No. 4,880,611 ("Crystalline Composition") (Mobil Oil Corp.) (x-ray diffraction); No. 4,877,762 ("Catalyst for

(continued...)

One aspect of the Federal Circuit's decision in this case presents practical difficulties to inventors drafting fingerprint claims. The Court of Appeals held that an infringement analysis of a claim that recites lines of x-ray diffraction data "does not permit ignoring a substantial number of lines altogether." Pet. App. at 12a. This is so, the Federal Circuit reasoned, because "[i]t is the claim that sets the metes and bounds of the invention." *Id.*

This reasoning suffers from two flaws. First, usually well before any court's infringement analysis, x-ray diffraction

---

[3](...continued)
Simultaneous Hydrotreating and Hydrodewaxing of Hydrocarbons") (Union Oil Co.) (x-ray diffraction); No. 4,696,794 ("Cl-1957D Antibiotic Compound and its Production") (Warner-Lambert Co.) (infrared absorption and nuclear magnetic resonance); No. 4,690,808 ("Crystalline Gallophosphate Compositions") (Union Carbide Corp.) (x-ray diffraction); No. 4,683,326 ("Solvent-Free Crystallization of Pentaerythritol Tetrakis and the Novel Alpha-Crystalline Form Thereof") (Ciba-Geigy Corp.) (x-ray diffraction); No. 4,681,747 ("Process for the Preparation of Metallosilicates of Tetravalent Lanthanide and Actinide Series Metals Using Heterpoly Metallates") (Standard Oil Co.) (x-ray diffraction); No. 4,512,877 ("Process for Improving the Quality of Catalytically Cracked Gasoline") (Shell Oil Co.) (x-ray diffraction); No. 4,510,312 ("Manufacture of Antibiotics") (Glaxo Group Ltd.) (x-ray diffraction); No. 4,510,098 ("Insecticidal Product") (Imperial Chem. Indus. PLC) (infrared absorption and crystal lattice characteristics); No. 4,503,044 ("Antibiotic LL-D05139.Beta") (American Cyanamid Co.) (ultraviolet spectrum, infrared spectrum, and nuclear magnetic resonance spectrum); No. 4,279,894 ("Streptomyces Metabolite") (Imperial Chem. Indus. Ltd.) (infrared spectrum, proton magnetic resonance spectrum, and ultraviolet spectrum); No. 4,271,305 ("Thiazolinoazetidinones and Process Therefor") (Eli Lilly & Co.) (nuclear magnetic resonance and infrared spectrum); No. 3,954,970 ("Actinomycin Complex from Micromonospora") (Schering Corp.) (ultraviolet absorption and infrared absorption); and No. 3,931,325 ("Perfluorocyclohexene-1, 4-Dione") (Dow Chem. Co.) (infrared absorption and fluorine resonance).

data used in a claim is generated using equipment available at the time the patent application is written. Over the years, as the x-ray diffraction equipment has improved, identification of the structure of a compound has necessitated fewer data points (i.e., fewer lines in a table of x-ray diffraction data). There is no way for an inventor to include only those data points that will be sufficient for some unknown future generation of x-ray diffraction equipment to do an analysis for the purposes of determining patent infringement that does not "ignor[e] a substantial number of lines altogether." In addition, the latest generation of equipment, though available to others, may not be available to a particular inventor. (Did the Federal Circuit intend to impose upon every inventor an obligation to obtain data with the latest equipment anywhere available?) The only practical thing for an inventor to do in drafting a patent application is to provide the x-ray diffraction data obtained from the equipment available to the inventor, but the decision of the Court of Appeals can penalize the inventor who does so.

Secondly, the Federal Circuit's reasoning—that one may not ignore a "substantial number" of lines of x-ray diffraction data because the claim sets the metes and bounds of the invention—is spurious. While it is true that the claim defines the invention, a fingerprint claim seeks to identify the structure of a compound that is the true subject of the claim. As the Federal Circuit recognized for the claim of the Bristol-Myers '657 patent in the case at bar: "The claim as written and allowed simply describes a compound having specified chemical properties. . . . The '657 claim is a claim for a compound." Pet. App. at 7a. Thus it is the compound itself that truly sets the metes and bounds of a fingerprint claim. Therefore, when an inventor is unable to describe precisely or completely the structure of a new compound and, so, uses a fingerprint claim in a patent, it is improper to require that

proof of infringement make use of any portion of the data that is scientifically unnecessary to establish the identity of the compound.

Furthermore, while fingerprint claims may be the only practical way to claim certain inventions, the Federal Circuit's decision in the case at bar discourages the use of fingerprint claims by rendering uncertain the proof required to demonstrate infringement of such claims.

Specifically, the Federal Circuit, noting that a proper infringement analysis requires a comparison of the claim with the accused product, held that the District Court's comparison—based on the use of a reference pattern obtained from Bristol-Myers' commercial product—was improper. Pet. App. at 11a. An examination of the District Court's opinion, however, reveals that the court held—after a bench trial—that Bristol-Myers' proofs were a scientifically sound comparison of the claim to the allegedly infringing compound. First, the District Court noted Zenith's challenge to the comparison undertaken by Bristol-Myers:

> Zenith contends that Brittain [a Bristol-Myers expert] failed to establish that any of the x-ray diffraction patterns, *including his Bouzard monohydrate reference pattern*, conform to the x-ray diffraction pattern that forms the claim of the '657 patent. The Court disagrees . . . .

Pet. App. at 50a (emphasis added). After detailing the evidence submitted on this point by experts for both parties, the District Court stated: "The Court thus concludes that Zenith's claim that Brittain's reference pattern is not of the same compound claimed in the '657 patent is without any merit." *Id.*

In short, the District Court after trial found, as a matter of scientific fact, that the reference pattern was an x-ray diffraction pattern of the claimed compound. Thus, the District Court made a finding that Bristol-Myers put forth adequate scientific evidence and expert testimony to establish that the reference pattern could be used as a means of comparing the claim with the accused product. By holding that this finding was in error (without any citation to or discussion of the clearly erroneous standard for setting aside a trial court's findings of fact, Fed. R. Civ. P. 52(a)), the Federal Circuit has left inventors completely uncertain about what proof is required to demonstrate infringement of fingerprint claims.

With the method of proving infringement of fingerprint claims left indeterminate, and the standard of proof disconnected from sound science, inventors will have no incentive to use such claims. Because fingerprint claims may be the only practical way to protect certain inventions in patents, this will serve only to discourage inventors from seeking patent protection (and thereby disclosing their discoveries to the public) for such inventions. If only trade secret protection is available for such inventions, there will be much less progress in an important segment of useful arts. Hence, this aspect of the Federal Circuit's decision is contrary to the constitutional purpose underlying the patent laws, and therefore this Court should grant the petition.

II. THE FEDERAL CIRCUIT'S DECISION WILL DISCOURAGE INVENTORS FROM SEEKING PATENT PROTECTION FOR INVENTIONS THAT ARGUABLY PERFORM KNOWN FUNCTIONS

Even if there is no literal infringement of a patented invention, there still may be infringement under the long-established doctrine of equivalents if the accused product performs substantially the same function, in substantially the same way, to achieve substantially the same result as the claimed invention. *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 608 (1950).

In the present case, the Federal Circuit held that there was no infringement under the doctrine of equivalents because the patented invention performed a substantially different function from that performed by the allegedly infringing compound. Pet. App. at 17a. Specifically, the Court of Appeals, noting that the function must be seen in the context of the patent, the patent application prosecution history, and the prior art, *id.* at 15a (citing *Graver Tank*, 339 U.S. at 609), ruled that the function of Bristol-Myers' patented compound could not be "the delivery of therapeutic value to the patient," because that function was in the prior art. *Id.* at 15a n.9.

The ruling that an invention's function for the purpose of the tripartite test of *Graver Tank* must be a new function represents a surprising and drastic restriction of the doctrine of equivalents. Aside from this ruling being flatly contrary to the precedent of this Court and the Federal Circuit (as noted by petitioner, Pet. at 20), this ruling so weakens the doctrine of equivalents that inventors will be discouraged from seeking patent protection for discoveries that might be construed to perform known functions.

The draconian results of the Federal Circuit's view of the doctrine of equivalents may be illustrated by again considering Roche's U.S. Patent No. 4,579,855, discussed *supra*. As described in this patent, it was known that mefloquin hydrochloride was an active substance for the treatment of a certain form of malaria. U.S. Patent No. 4,579,855, col. 1, ll. 20-23. Roche's scientists discovered that pure mefloquin hydrochloride occurs in various modifications, with modification E having particularly interesting properties: better solubility and bioavailability. *Id.*, col. 1, ll. 43-47, 60-67. The function of modification E of pure mefloquin hydrochloride is the same as the function of the previously known form of mefloquin hydrochloride: to treat a certain form of malaria.

Assume a competitor of Roche were to manufacture a compound used to treat that form of malaria, which compound did not literally come within the claims of Roche's U.S. Patent No. 4,579,855. If a court were to hold that the function of the compound of this patent could not be the known function of treating that form of malaria, Roche would effectively be unable to protect its invention because the doctrine of equivalents would be deemed to be inapplicable. Given such a result for that patent, Roche would have no incentive to seek patent protection for future discoveries that might arguably be said to perform known functions.[4]

Heretofore, no precedent gave Roche or AHP any indication that, should any of its patents be deemed to be for an

---

[4]In fact, five of the other Roche U.S. patents (Nos. 4,304,861; 4,278,663; 4,206,129; 4,152,424; and Re. 28,700) each disclose an antibiotic. As such, the function of each could be said to be the same function of "the delivery of therapeutic value to the patient." Pet. App. at 15a n.9.

invention that performs an old function, such patents would effectively be given no scope of protection under the doctrine of equivalents. As petitioner correctly notes, Pet. at 20-21, prior decisions of this Court and the Federal Circuit did in fact apply the doctrine of equivalents to patented inventions that performed known functions. As petitioner further correctly points out, Pet. at 25 & n.22, many if not most patents are issued for inventions that perform old functions in new ways.

Indeed, the patent laws recognize that inventions may be relatively incremental advancements over prior technology. Patents may be granted for "any new and useful process, machine, manufacture, or composition of matter, *or any new and useful improvement thereof.*" 35 U.S.C. § 101 (1988) (emphasis added).[5] All valid patents, by meeting the statutory requirements of utility, novelty, and nonobviousness (35 U.S.C. §§ 101-03 (1988)), necessarily represent useful advances over the prior art, and often perform old functions in improved ways. Even if a patent is not a pioneer, it is still entitled to protection under the doctrine of equivalents. *Continental Paper Bag Co v. Eastern Paper Bag Co.*, 210 U.S. 405, 415 (1908) ("not . . . only pioneer patents are entitled to invoke the doctrine of equivalents"); *Laitram Corp. v. Cambridge Wire Cloth Co.*, 863 F.2d 855, 861 (Fed. Cir. 1988) (the doctrine of equivalents is applicable to both pioneer and non-pioneer inventions), *cert. denied*, 490 U.S. 1068 (1989); *see also Eibel Process Co. v. Minnesota &*

---

[5]Abraham Lincoln was granted U.S. Patent No. 6469, entitled "Buoying Vessels Over Shoals," for "a new and improved manner of combining adjustable buoyant air chambers with a steamboat or other vessel." *Id.*, col. 1, ll. 4-7. It is apparent that other mechanisms that had the same function of buoying vessels over shoals were previously known.

Ontario Paper Co., 261 U.S. 45, 63 (1923) ("[The inventor's patent] was not a pioneer patent, creating a new art; but a patent which is only an improvement on an old machine may be very meritorious and entitled to liberal treatment."). The Federal Circuit's decision in this case, however, effectively eliminates the doctrine of equivalents for inventions that perform known functions.

The deleterious consequences of the Federal Circuit's decision concerning the doctrine of equivalents are readily apparent. This Court has noted that without the doctrine of equivalents, which provides protection against more than just the copying of literal infringement, an inventor would be discouraged from seeking patent protection and disclosing his invention to the public:

> Outright and forthright duplication is a dull and very rare type of infringement. To prohibit no other would place the inventor at the mercy of verbalism and would be subordinating substance to form. It would deprive him of the benefit of his invention and *would foster concealment rather than disclosure of inventions*, which is one of the primary purposes of the patent system.

Graver Tank, 339 U.S. at 607.

The Federal Circuit's dilution of the doctrine of equivalents thus further erodes the incentives for inventors to disclose their inventions rather than maintaining them as trade secrets. As with its ruling in this case regarding fingerprint claims, the Federal Circuit's holding on the doctrine of equivalents is contrary to the foundational purpose of the patent laws prescribed in the Constitution. This provides an independent reason for the Court to grant the petition.

CONCLUSION

For the foregoing reasons, and for the reasons set forth in the Petition for a Writ of Certiorari, this Court should grant the petition and reverse the judgment of the Court of Appeals in this matter.

Respectfully submitted,

ALAN P. KASS
(Counsel of Record)
GEORGE M. GOULD
HOFFMANN-LA ROCHE INC.
340 Kingsland Street
Building 85—5th Floor
Nutley, New Jersey 07110
(201) 235-5000

LOUIS L. HOYNES, JR.
EGON E. BERG
AMERICAN HOME
PRODUCTS CORP.
Five Giralda Farms
Madison, New Jersey 07940
(201) 660-5000

Dated: October 14, 1994